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09/815,297	03/23/2001	Jacqueline A. Oldham	39-236	4610

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EXAMINER

EVANISKO, GEORGE ROBERT

ART UNIT PAPER NUMBER

3762

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

GROUP 3700

Application Number: 09/815,297  
Filing Date: March 23, 2001  
Appellant(s): OLDHAM, JACQUELINE A.

\_\_\_\_\_  
Jeffry H. Nelson  
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 5, 2004.

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**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 1, 8-10, and 12 (Group I) and 2-7 (Group II) do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

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**(9) Prior Art of Record**

5097833	Campos	3-1992
5350415	Cywinski	9-1994

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-7 and 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Campos. For claim 1, Campos shows the claimed “means for generating a predetermined stimulation signal” as all of the block elements except for the transformer and transformer output in figures 11 and 17-21 and described in the specification in column 8, lines 7-34, and column 9, line 59 to column 11, line 5. Campos shows the claimed “means for applying the signal to a muscle” as the transformer and transformer outputs in figures 11 and 17-21 and described in the specification in column 8, lines 7-34, and column 9, line 59 to column 11, line 5. In addition, Campos states in the abstract and throughout the specification (column 1, lines 6-12) the use of his system for applying electrical stimulation to muscles. Campos meets the limitations of the last paragraph in the claim, “wherein the signal comprises...first pulse train”, several different ways. Campos shows in figure 9 and describes in column 7, line 57 to column 8, line 6, (additionally, figures 8 and 10 can meet the claimed limitations) the claimed “series of regularly spaced bursts of pulses” as a repeating series of regularly spaced stimulation bursts or supercycles occurring at 8 Hz, with each burst including the claimed “first continuous train of regularly spaced pulses” as the 16 pulses per second represented by the first pulses of Quad 1 and Quad 3. The claimed “second component as a series of regularly spaced second trains of

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regularly spaced pulses” are the 64 pulses per second represented by the second and fourth pulses in each of Quad 2, 3, and 4 that are combined in the stimulation signal with the first component. For claim 2, Campos shows the claimed “third component as a series of regularly spaced third trains of regularly spaced pulses” as the 128 Hz pulses, pulses 2 and 3 in Quad 1, combined with the first and second components of the stimulation signal. It is noted that the claims are open ended “comprising” claims and do not preclude additional pulses in the bursts.

Another way Campos meets the claimed limitations of the last paragraph is to consider the first and second pulse of the first and second supercycle as the first component, the second component trains as Quads 2 and 4 in each supercycle, and the third component being pulses 2 and 3 in Quad 1. To meet the limitation of “regularly spaced bursts of pulses”, Campos provides repeating supercycles, with the first and second supercycle being considered the first regularly spaced burst of pulses, and the third and fourth supercycle being considered the second regularly spaced burst of pulses. Alternatively, since the claim is open ended, the fourth and fifth supercycle can be considered the second regularly spaced burst of pulses and will provide spaced apart bursts of pulses.

Claims 1-7, 12, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Cywinski. For claim 1, Cywinski shows the claimed “means for generating a predetermined stimulation signal”, as elements 1 and 2 in figures 3 and 4 (column 5, lines 45-58), and the “means for applying the signal to a muscle”, as electrodes 3 in figure 3 (column 5, line 51-53). In addition, Cywinski states in the abstract and throughout the specification (column 1, lines 6-14) the use of his system for applying electrical stimulation to muscles. Cywinski meets the

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limitations of the last paragraph in the claim, “wherein the signal comprises... first pulse train”, in the specification in column 5, lines 15-37 and figure 2. Cywinski provides the claimed “series of regularly spaced bursts of pulses” as repeating periods/bursts of the stimulation signal having a recurrence period of  $1 \pm 0.2$  seconds (column 5, lines 35-37). Cywinski provides the claimed “first continuous train of regularly spaced pulses” as the continuous low rate pulses occurring at 120-200 milliseconds. Cywinski provides the claimed “second component as a series of regularly spaced second trains of regularly spaced pulses” as the pulses delivered at 60 to 80 milliseconds combined with the first component, with one second component train occurring in the first recurrence period and a second component second train occurring in the second recurrence period. For claim 2, Cywinski describes the claimed “third component as a series of regularly spaced third trains of regularly spaced pulses” as the 10-20 ms pulses occurring over 20-40 ms, combined with the first and second components. It is noted that the claim is a comprising claim and does not preclude additional pulses in the bursts. To meet the limitation of “regularly spaced bursts of pulses”, Cywinski provides recurring periods/bursts of pulses, with the first and second recurring periods being the first regularly spaced burst of pulses, and third and fourth recurring periods being the second regularly spaced burst of pulses. Alternatively, since the claim is open ended, the fourth and fifth recurring periods can be considered the second regularly spaced burst of pulses and will provide spaced apart bursts of pulses.

Claims 8-10 and 12 are rejected under 35 U.S.C. 103 in view of Campos. This rejection is set forth in a prior Office Action, mailed on 6/25/03.

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Claims 8-10 are rejected under 35 U.S.C. 103 in view of Cywinski. This rejection is set forth in a prior Office Action, mailed on 6/25/03.

**(11) Response to Argument**

The main arguments are that the Cywinski and Campos references do not disclose “bursts” of pulses but provide continuous pulses and that the references do not disclose “spaced apart” bursts of pulses. The Examiner does not agree with these arguments.

Independent claims 1 and 16 state that the stimulation signals are a series of regularly spaced “bursts” of pulses. The applicant’s specification does not provide a definition of “burst”. The applicant provided dictionary definitions for the term “burst” in the response (4/21/03) to the non final action (and in the appeal brief) and stated that the dictionary definition of burst includes: “to appear or disappear suddenly”; “to make an abrupt beginning”; “a sudden intense outbreak”; “a brief intense, or violent effort”. Webster's Third New International Dictionary p. 301 (1993). In addition, the Examiner provided a definition of “burst” in the final rejection (6/25/03) to include “a volley of shots”. Webster’s II New College Dictionary p. 149 (1995). The Examiner stated in the final rejection that both Cywinski and Campos meet the definition of a “burst” of pulses even though the pulse trains are repeating since both references provide electrical pulses that “appear or disappear suddenly”, “make an abrupt beginning”, “a sudden intense outbreak”, and/or “a brief intense, or violent effort”. Because both references provide no voltage or current to the electrodes, then suddenly apply a brief voltage/current pulse to the electrodes causing stimulation pulses, and then again provide no current or voltage to the electrodes until the next pulse/burst, the references meet the definition of burst. In addition, both references provide “a volley of shots” since there is an emission of many pulses to the electrodes.

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In addition, it is noted that the claims are open-ended “comprising” claims and do not preclude additional bursts of pulses between the claimed bursts of pulses. Campos and Cywinski provide continuous repeating pulse trains and therefore, every third, fourth, fifth, etc. pulse train can be considered to not be part of the “claimed” invention, thus resulting in spaced apart bursts of pulse trains.

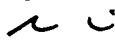
The argument that both Campos and Cywinski do not provide “spaced apart” bursts, such as providing burst “on” times of ten seconds and “off” times of fifty seconds, is not persuasive since nothing in the claims state that the bursts are “spaced apart”. Independent claims 1 and 16 state that the stimulating signal comprises a “series of regularly spaced bursts of pulses”. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The “series of regularly spaced bursts of pulses”, given its broadest reasonable interpretation, could mean that the bursts overlap each other, occur right after the other, or occur once per day, as long as they are regularly spaced. On an initial glance at the limitation of a “series of regularly spaced bursts of pulses”, one would most likely look for a system that applies the bursts at a constant frequency, such as once per second, and not with a separation or spaced apart time between each of the bursts. Both Campos and Cywinski provide continuous, repeating bursts of pulses and therefore meet the limitation of a “series of regularly spaced bursts of pulses”.

For the above reasons, it is believed that the rejections should be sustained.



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Respectfully submitted,

  
George R Evanisko  
Primary Examiner  
Art Unit 3762

8/2/04

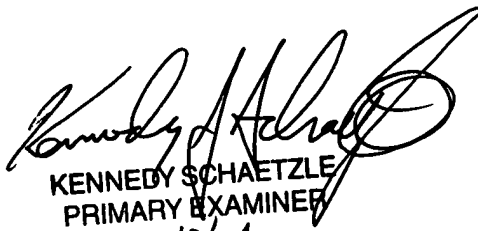
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August 2, 2004

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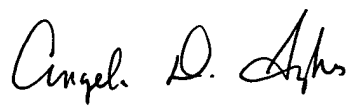
  
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